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In re Patent Application of:
RAYNOR ET AL.
Serial No. 09/993,387
Filing Date: NOVEMBER 16, 2001

REMARKS

Applicants would like to thank the Examiner for the thorough examination of the present application. The independent claims have been amended to more clearly define the present invention over the cited prior art references as helpfully suggested by the Examiner. The claim amendments and arguments supporting patentability of the claims are provided below.

I. The Amended Claims

The present invention, as recited in amended independent Claim 11, for example, is directed to a solid state imaging device comprising a two-dimensional array of pixels defining an image plane, and readout electronics comprising at least one store circuit laterally adjacent the image plane for reading signals therefrom. A multiconductor signal bus is connected between the array of pixels and the readout electronics. The multiconductor bus comprises a respective conductor to provide a dedicated readout channel for only one pixel of the two-dimensional array of pixels defining the image plane.

Independent Claim 30 is a method counterpart of Claim 11 and has been similarly amended. Independent device Claim 21 has also been similarly amended.

II. The Claims Are Patentable

The Examiner rejected independent Claims 11, 21 and 30 over the Lee et al. patent. The Lee et al. patent discloses various embodiments of an imaging device including a signal bus comprising four conductors connected to four pixels

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via conventional row and column addressing circuitry. (Col. 3, lines 34-40). The four pixels are used for each different color pixel: two green pixels, one blue pixel, and one red pixel, and the imaging device includes four output channels for each different color. (Column 3, line 22). Indeed for the embodiment shown in FIG. 2a and relied upon by the Examiner in his rejection, "[t]he column-wise output signal routing connects all the pixels of the same color filter covering to a color specific output channel." (Column 3, lines 22-24).

In light of the Examiner's suggestion, the independent claims have been amended to refer to each conductor of the multiconductor bus providing a dedicated readout channel for only one pixel. The Applicants respectfully submit that this wording clearly distinguishes the present invention from Lee et al., which provides a dedicated readout channel to multiple pixels with an associated reliance on multiplexers. In sharp contrast, the claimed invention provides a dedicated readout channel for only one pixel as set out in the amended independent claims and as fully supported by the specification.

This feature enables a multiplex transistor to be done away with in the design of each pixel, and thus provides an advantage in being able to locate further parts of the readout electronics off the plane of the image sensor.

Accordingly, it is submitted that amended independent Claim 11 is patentable over the Lee et al. patent. Amended independent Claims 21 and 30 are similar to amended independent Claim 11. Therefore, it is submitted that these claims are also patentable over the Lee et al. patent.

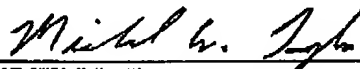
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In view of the patentability of amended independent Claims 11, 21 and 30, it is submitted that the dependent claims, which include yet further distinguishing features of the invention are also patentable. These dependent claims need no further discussion herein.

III. CONCLUSION

In view of the amendments to the claims and the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I HEREBY CERTIFY that the foregoing correspondence has been forwarded via facsimile number 571-273-8300 to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-

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1450 this 1st day of September, 2006.